

Contents

ANALGESICS

- Hypoglycemia Induced by Intrathecal Opioids in Mice: Stereospecificity, Drug Specificity and Effect of Fasting** David A. Brase, Amrita K. Singha, Uriel Estrada, Fred Lux and William L. Dewey 899
- Brainstem Sites Differentially Sensitive to β -Endorphin and Morphine for Analgesia and Release of Met-Enkephalin in Anesthetized Rats** Leon F. Tseng, Rui Tang, Robert Stackman, Amadou Camara and James M. Fujimoto 930
- Delta* but Not *Mu* Opioid Receptors in the Spinal Cord are Involved in Antinociception Induced by β -Endorphin Given Intracerebroventricularly in Mice** Harold Hongwon Suh and Leon Fu Tseng 981

AUTONOMIC PHARMACOLOGY

- Role of Calcium in Adrenergic Neurochemical Transmission in the Aging Heart** Jay Roberts, Mary L. Mortimer, Patrick J. Ryan, Mark D. Johnson and Nihal Tumer 957

BEHAVIORAL PHARMACOLOGY

- Comparative Behavioral, Neurochemical and Pharmacological Activities of Dihydropyridine Calcium Channel Activating Drugs** S. K. O'Neill, D. W. McKay, N. Campbell, C. R. Triggle, M. Crowley and G. T. Bolger 905
- Pharmacological Characterization of Cannabinoids in the Elevated-Plus Maze** Emmanuel S. Onaivi, Maude R. Green and Billy R. Martin 1002
- N*-Methyl-D-aspartate Antagonism and Phencyclidine-like Activity: A Drug Discrimination Analysis** Wouter Koek, James H. Woods and Francis C. Colpaert 1017
- Unusual Behavioral Profile of Alprazolam in Squirrel Monkeys** Joseph G. Wettstein 1070
- Body Temperature Differentially Affects Ethanol Sensitivity in Both Inbred Strains and Selected Lines of Mice** D. A. Finn, M. Bejanian, B. J. Jones, R. F. McGivern, P. J. Syapin, J. C. Crabbe and R. L. Alkana 1229

CARDIOVASCULAR PHARMACOLOGY

- Interaction of Verapamil and Cimetidine: Stereochemical Aspects of Drug Metabolism, Drug Disposition and Drug Action** Gerd Mikus, Michel Eichelbaum, Christine Fischer, Stanislaw Gumulka, Ulrich Klotz and Heyo K. Kroemer 1042
- Vascular Contraction Induced by Activation of Membrane Calcium Ion Channels is Enhanced in Streptozotocin-Diabetes** Richard E. White and Gerald O. Carrier 1057
- Electrophysiologic Effects of E-4031, a Class III Antiarrhythmic Agent, on Re-entrant Ventricular Arrhythmias in a Canine 7-day-old Myocardial Infarction Model** Hiroshi Katoh, Satoshi Ogawa, Izumi Furuno, Yoshihiro Sato, Shisei Yoh, Kimiko Saeki and Yoshiro Nakamura 1077
- Temperature-Sensitive Adenosine-Mediated Vasoconstriction in the Skin Microcirculation** Igor Stojanov and Kenneth G. Proctor 1083
- Effects of the Potassium Channel Activator, BRL 34915, on the Action Potential Characteristics of Canine Cardiac Purkinje Fibers** Antoine Bril and Ricky Y. K. Man 1090
- Effect of Thromboxane Receptor Blockade on Oxygen Supply/Consumption Variables during Reperfusion in the Anesthetized Dog** Gary J. Grover, Paul G. Sleph and Harvey R. Weiss 1097
- Deferoxamine Pretreatment Reduces Canine Infarct Size and Oxidative Injury** Edward J. Lesnefsky, John E. Repine and Lawrence D. Horwitz 1103
- State Dependence of Ethacizin and Ethmozin Block of Sodium Current in Voltage-Clamped and Internally Perfused Cardiac Purkinje Cells** Jonathan C. Makielski, Vladislav V. Nesterenko, William L. Nelson, A. I. Undrovinas, C. Frank Starmer and Leonid V. Rosenshtraukh 1110

Contents continued on iv

Analysis of Cardiovascular and Pulmonary Responses to Endothelin-1 and Endothelin-3 in the Anesthetized Cat	R. K. Minkes, J. A. Bellan, R. M. Saroyan, M. D. Kerstein, D. H. Coy, W. A. Murphy, B. D. Nossaman, D. B. McNamara and P. J. Kadowitz	1118
Characterization of 5-Hydroxytryptamine Receptors on Isolated Ovine Uterine Artery in Late Pregnancy	Lubo Zhang and Donald C. Dyer	1236
CELLULAR AND MOLECULAR PHARMACOLOGY		
Stimulation of a Dopamine D₁ Receptor Enhances Inositol Phosphates Formation in Rat Brain	Ashiwel S Undie and Eitan Friedman	987
Two Dissociable Phases in the Contractile Response of the Guinea Pig Isolated Vas Deferens to Adenosine Triphosphate	J. S. Fedan and S. J. Lamport	993
Thermodynamic Analyses of the Binding of Substrates and Uptake Inhibitors on the Neuronal Carrier of Dopamine Labeled with [³H]GBR 12783 or [³H]Mazindol	Jean-Jacques Bonnet, Saloua Benmansour, Jean Costentin, Eric M. Parker and Luigi X. Cubeddu	1206
Angiotensin II Desensitization and Ca⁺⁺ and Na⁺ Fluxes in Cultured Intestinal Smooth Muscle Cells	Suma I. Shimuta, Celia A. Kanashiro, Maria E. M. Oshiro, Therezinha B. Paiva and Antonio C. M. Paiva	1215
Effects of Histamine-Trifluoromethyl-Toluidide Derivative on Intracellular Calcium in Human Lymphocytes	Rong Qiu, Kenneth L. Melmon and Manzoor M. Khan	1245
Biochemical and Radiohistochemical Analyses of <i>Alpha-2</i> Adrenergic Receptors in the Kindling Model of Epilepsy	Lan S. Chen, Jon B. Weingart and James O. McNamara	1272
DEVELOPMENTAL PHARMACOLOGY		
Pharmacokinetics and Dynamics of Furosemide in the Newborn Piglet	Jeffrey J. Miceli, Paul A. Kramer, Dennis J. Chapron, Ted S. Rosenkrantz and John R. Raye	1126
DRUG METABOLISM AND DISPOSITION		
Sequential Metabolism of Salicylamide Exclusively to Gentisamide 5-Glucuronide and Not Gentisamide Sulfate Conjugates in Single-Pass <i>in Situ</i> Perfused Rat Liver	Xin Xu, Bing K. Tang and K. Sandy Pang	965
ENDOCRINE PHARMACOLOGY		
Inhibition of Endopeptidase 24.15 Greatly Increases the Release of Luteinizing Hormone and Follicle Stimulating Hormone in Response to Luteinizing Hormone/Releasing Hormone	Abraham Lasdun and Marian Orlowski	1265
GASTROINTESTINAL PHARMACOLOGY		
Gastric Antiulcer and Cytoprotective Effects of Dipyridamole in Rats	Mohammad Tariq and Abdulrehman M. Ageel	944
Inhibition of Bile Acid Transport by Cyclosporine A in Rat Liver Plasma Membrane Vesicles	Richard H. Moseley, Timothy R. Johnson and Jeffery M. Morrisette	974
<i>Kappa</i> Agonists Inhibit Gastric Emptying but Not Acid Secretion in Rhesus Monkeys	P. Lynn Touzeau and T. Shea-Donohue	1010
Effects of Zacopride and BMY25801 (Batanopride) on Radiation-Induced Emesis and Locomotor Behavior in the Ferret	Gregory L. King and Michael R. Landauer	1026
Emesis and Defecations Induced by the 5-Hydroxytryptamine (5-HT₃) Receptor Antagonist Zacopride in the Ferret	Gregory L. King	1034
Regulation of the Neurotensin Receptor and Intracellular Calcium Mobilization in HT29 Cells	John T. Turner, Marilyn R. James- Kracke and Jean M. Camden	1049
Effect of Endothelium-Derived Relaxing Factor on the Gastric Lesion Induced by HCl in Rats	Hisato Kitagawa, Fumiyo Takeda and Hiroshi Kohei	1133
NEUROPHARMACOLOGY		
Desensitization of Muscarinic Stimulated Hippocampal Cell Firing is Related to Phosphoinositide Hydrolysis and Inhibited by Lithium	Norbert J. Pontzer and Fulton T. Crews	921

Effects of Cocaine on Extrapyramidal and Limbic Dynorphin Systems	Patricia L. Smiley, Michel Johnson, Lloyd Bush, James W. Gibb and Glen R. Hanson	938
Role of Opiates in Striatal D-1 Dopamine Receptor Supersensitivity Induced by Chronic L-DOPA Treatment	Antonio Groppetti, Gianpiera Ceresoli, Virginio Mandelli and Marco Parenti	950
<i>Alpha</i>-2 Adrenergic Inhibition of Ca⁺⁺-Evoked [³H] Norepinephrine Release from Synaptosomes is Blocked by Depolarization	John F. Bowyer and Norman Weiner	1063
Ethanol Inhibits N-Methyl-D-Aspartate-Stimulated [³H] Norepinephrine Release from Rat Cortical Slices	Rueben A. Gonzales and John J. Woodward	1138
Effects of Central <i>Alpha</i>-2 Adrenergic Compounds on Canine Narcolepsy, a Disorder of Rapid Eye Movement Sleep	Seiji Nishino, Laurel Haak, Heather Shepherd, Christian Guilleminault, Toshiaki Sakai, William C. Dement and Emmanuel Mignot	1145
Kinetic and Dynamic Components of Increased Benzodiazepine Sensitivity in Aging Animals	Jamie G. Barnhill, David J. Greenblatt, Lawrence G. Miller, Anat Gaver, Jerold S. Harmatz and Richard I. Shader	1153
5-HT₂ Receptor Blockade by ICI 169,369 and other 5-HT₂ Antagonists Modulates the Effects of D-2 Dopamine Receptor Blockade	Charles F. Saller, Michael J. Czupryna and Andre I. Salama	1162
One Year of Continuous Treatment with Haloperidol or Clozapine Fails to Induce a Hypersensitive Response of Caudate Putamen Neurons to Dopamine D1 and D2 Receptor Agonists	Lian Hai Jiang, Richard J. Kasser, C. Anthony Altar and Rex Y. Wang	1198
Effects of Acute and Chronic Administration of (+)-SKF 10,047 on Body Temperature in the Rat: Cross-Sensitization with Phencyclidine	M. Bejanian, R. N. Pechnick and R. George	1253
Pharmacological Evidence For Feedback Regulation of Dopamine Metabolism in Solid Fetal Substantia Nigra Transplants	Rolando Meloni and Karen Gale	1259
Chemically Induced Hypoglycemia and Anoxia: Relationship to Glutamate Receptor-Mediated Toxicity in Retina	Gail D. Zeevalk and William J. Nicklas	1285
Acute- and Long-Term Glutamate-Mediated Regulation of [Ca⁺⁺]_i in Rat Hippocampal Pyramidal Neurons <i>in Vitro</i>	Steven R. Glaum, Wendy K. Scholz and Richard J. Miller	1293
PROSTAGLANDINS AND LEUKOTRIENES		
Bacterial Sepsis-Induced Decrease in Lung Vascular Reactivity to 9,11-Dideoxy-11α,9α-Epoxy-methano-Prostaglandin F_{2α} (U46619) in the Rat	M. J. Schneidkraut and R. W. Carlson	1171
PULMONARY PHARMACOLOGY		
AHR-14310C: A Potent, Long-Acting, Nonsedating H₁-Antihistamine that Prevents Antigen-Induced Mucus Formation in Sensitive Rats	J. C. Nolan, M. H. Foxwell, L. L. Whitman, J. M. Yanni, D. A. Walsh, B. F. Kilpatrick, D. N. Johnson and A. G. Proakis	1177
RENAL PHARMACOLOGY		
Reserpine Up-Regulation of Rat Renal Cortical <i>Beta</i> Adrenergic Receptors is Independent of Its Effect on the Sympathetic Nervous System	Timothy L. Fortin and Pavur R. Sundaresan	913
Furosemide Acts on Short Loop of Descending Thin Limb, but Not on Long Loop	Kyu Yong Jung and Hitoshi Endou	1184
Bumetanide-Induced Natriuresis and Antinatriuresis in the Proximal and Distal Parts of the Human Nephron. Investigations in Acute and Chronic Bumetanide Treatment	Niels-Henrik Staalsen and Eva Steiness	1222
TOXICOLOGY		
Altered Synaptosomal Phospholipid Metabolism after Toluene: Possible Relationship with Membrane Fluidity, Na⁺,K⁺-Adenosine Triphosphatase and Phospholipid Methylation	Carl P. LeBel and Robert A. Schatz	1189
Vitamin A Protects the Small Intestine from Methotrexate-Induce Damage in Rats	Kazuyuki Tsurui, Yoshinori Kosakai, Toshiharu Horie and Shoji Awazu	1278

TOXICOLOGY

Altered Synaptosomal Phospholipid Metabolism after Toluene: Possible Relationship with Membrane Fluidity, Na⁺,K⁺-Adenosine Triphosphatase and Phospholipid Methylation

Carl P. LeBel and Robert A. Schatz 1189

Vitamin A Protects the Small Intestine from Methotrexate-Induce Damage in Rats

Kazuyuki Tsurui, Yoshinori Kosakai, Toshiharu Horie and Shoji Awazu 1278